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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/773,427	01/31/2001	Bryan D. Skene	50002.05USU1	6987
38878	7590	06/16/2005		
DARBY & DARBY P.C. P.O. BOX 5257 NEW YORK, NY 10150-5257			EXAMINER BOUTAH, ALINA A	
			ART UNIT 2143	PAPER NUMBER

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/773,427	SKENE ET AL.	
	Examiner	Art Unit	
	Alina N Boutah	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 January 2005.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5,7-11,13,14,17-21 and 23-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 3 and 4 is/are allowed.
- 6) Claim(s) 1,2,5,7-11,13,14,17-21 and 23-33 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- An*^b Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Response to Amendment

This action is in response to Applicant's amendment filed January 14, 2005. Claims 1-3, 5, 7, 9-11, 12 and 18-21 are amended. Claims 6, 12, 15-16 and 22 have been cancelled. Claims 23-33 are newly added. Claims 1-5, 7-11, 13-14, 17-21 and 23-29 are pending in the present application.

Oath/Declaration

The oath or declaration is has been provided in the response. The objection is now withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 5-12 and 18-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,774,660 issued to Brendal et al. (hereinafter referred to as Brendel) in view of USPN 6,754,706 issued to Swildens et al. (hereinafter referred to as Swildens).

(Amended) Regarding claim 1, Brendel teaches a method for enabling access to a resource on a wide area network environment, the wide area network environment including a plurality of server array controllers, each server array controller having at least one corresponding server, the method comprising:

- (a) receiving a request for a domain name resolution from a requestor (abstract; col. 2, lines 18-35);
- (b) performing a mathematical conversion of the requestor's internet protocol (IP) address to produce a result, wherein the mathematical conversion is based, in part, on a number of available servers associated with the plurality of server array controllers (col. 3, lines 31-38; col. 4, lines 50-58);
- (c) employing the result of the mathematical conversion to select a target server array controller from the plurality of server array controllers to handle the request (col. 4, lines 42-58);
- (d) sending a response to the requestor, the response including an address of the target server array controller (figure 7; col. 11, lines 5-23);
- (e) receiving at least one subsequent request from the requestor for the domain name resolution (col. 5, lines 33-40; figure 6); and
- (f) in response to each subsequent request from the requestor, sending a corresponding response including the address of the target server array controller to the requestor (col. 5, lines 33-40; col. 11, lines 5-23; figures 6 and 7).

(Amended) Regarding claim 2, Swildens teaches the method of claim 1, wherein the requestor is a local domain name system (LDNS) server (col. 3, lines 39-46).

(Amended) Regarding claim 5, Swildens teaches the method of claim 1, wherein the requestor communicates with a client through a web proxy for the resource (col. 7, lines 60-65).

(Amended) Regarding claim 7, Brendel teaches the method of claim 1, wherein the target server array controller associates the requestor with a virtual server that includes the resource, wherein the virtual server is managed by the target server array controller (abstract).

Regarding claim 8, Brendel teaches the method of claim 1, further comprising storing information associated with the request (col. 2, lines 29-35).

(Amended) Regarding claim 9, Brendel teaches the method of claim 8, wherein the information includes an IP address associated with the requestor, another IP address associated with the server array controller, and a time value for controlling how long information is valid (abstract; figure 4).

(Amended) Regarding claim 10, Swildens teaches the method of claim 1, wherein each subsequent request is made by any one of a plurality of LDNS servers (col. 3, lines 39-46).

Regarding claim 11, Brendel teaches the method of claim 1, wherein the target server array controller manages at least one virtual server that provides access to the resource (figure 4).

(Amended) Regarding claim 18, Brendel teaches a modulated data signal including computer executable instructions for enabling access to a resource on a wide area network environment, the wide area network environment including a plurality of server array controllers, each server array controller having at least one corresponding server, comprising:

(a) a receiver that receives a request for a domain name resolution from a connection that is associated with a domain name server (DNS) (abstract; col. 2, lines 18-35);

(b) a selector that selects a method for load balancing each request using a mathematical conversion of the DNS server's IP address that is based, in part, on a number of servers associated with the plurality of server array controllers, and employs the selected method to select a server array controller to handle each request (col. 3, lines 31-38; col. 4, lines 50-58);

(c) a sender that refers each request to the selected server array controller until another method is selected for load balancing each request, wherein persistent communication is established between the DNS server and the server (col. 3, lines 31-38; col. 4, lines 50-58).

However, Brendel does not explicitly teach employing a local domain name service (LDNS) to perform the above steps. Swildens teaches performing load-balancing algorithm by a LDNS (col. 3, lines 39-46). At the time the invention was made, one of ordinary skill in the art would have been motivated to employ a LDNS to perform load-balancing in order to minimizing bandwidth usage, thus maximizing the system's efficiency.

Claim 19 is similar to claim 18, therefore is rejected under the same rationale.

(Amended) regarding claim 20, Brendel teaches a computer data signal embodied in a carrier wave and representing computer executable instructions for providing persistent communication between a client and a server in a wide area network environment, the wide area network environment including a plurality of server array controllers, each server array controller having at least one corresponding server, comprising:

(a) receiving a request for a domain name resolution from a connection that is associated with the client (abstract; col. 2, lines 18-35);

(b) selecting a method for load balancing each request from the connection using a mathematical conversion of an IP address of the client, wherein the mathematical conversion is based, in part, on a number of servers associated with the plurality of server array controllers (col. 3, lines 31-38; col. 4, lines 50-58);

- (c) employing the selected method to select a server array controller to handle each request from the connection (col. 3, lines 31-38; col. 4, lines 50-58); and
- (d) persistently referring each request with the connection to the selected server array controller until another method is selected for load balancing each request from the connection.

Claim 21 is similar to claim 20, therefore is rejected under the same rationale.

(New) Regarding claim 23, Swildens teaches the method of claim 1, wherein the requestor is a local domain name system (LDNS) server, the request is associated with a first client, and at least one of the subsequent request is associated with the second client (col. 3, lines 39-46).

(New) Regarding claim 24, Brendel teaches the method of claim 1, wherein a first server receives the request and sends the response, and second server receives at least one of the subsequent requests and sends the response corresponding to the at least one subsequent request (figure 3).

(New) Regarding claim 25, Brendel teaches the method of claim 1, wherein a first DNS resolver receives the request and sends the response, and a second DNS resolver receives at least

one of the subsequent requests and sends the response corresponding to the at least one subsequent request, further comprising sharing connection data between the first server and the second server (figure 4).

(New) Regarding claim 26, Brendel teaches the method of claim 1, wherein the DNS resolver receives the request and sends the response, and a second DNS resolver receives at least one of the subsequent requests and sends the response corresponding to the at least one subsequent request, further comprising sharing persistent connection data between the first DNS resolver and the second DNS resolver (figure 4).

(New) Regarding claim 27, Brendel teaches the method of claim 1, further comprising:
(a) based on the result of the mathematical conversion, selecting a server; (b) based on the selected server, selecting the target server array controller (col. 3, lines 31-38; col. 4, lines 50-58).

(New) Regarding claim 28, Brendel teaches the method of claim 1, wherein the mathematical conversion comprising performing modulus arithmetic to produce the result, the modulus arithmetic based on the number of servers corresponding to the plurality of server array controllers (col. 3, lines 31-38; col. 4, lines 50-58).

(New) Regarding claim 29, Brendel teaches the method of claim 1, further comprising:
(a) converting the requestor's IP address into a first value; (b) performing modulus arithmetic based on the first value and a total amount of virtual servers that are available; (c) selecting a virtual server based on the modulus arithmetic; and (d) selecting the server array controller corresponding to the selected virtual server to be the target server array controller (col. 3, lines 31-38; col. 4, lines 50-58).

(New) Regarding claim 30, Brendel teaches the method of claim 9, further comprising, in response to receiving the at least one subsequent request from the requestor, based on the time value, selectively load balancing the additional request among the plurality of server array controllers (col. 3, lines 31-38; col. 4, lines 50-58).

(New) Regarding claim 31, Brendel teaches the method of claim 9, further comprising dynamically determining the time value (col. 3, lines 31-38; col. 4, lines 50-58).

(New) Regarding claim 32, Brendel teaches the method of claim 9, further comprising dynamically determining the time value based, at least in part, on a time of day (col. 3, lines 31-38; col. 4, lines 50-58).

(New) Regarding claim 33, this is similar to claim 20, therefore is rejected under the same rationale.

Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel in view of Swildens, in further view of USPN 6,078,943 issued to Yu.

Regarding claim 13, Brendel teaches a method for enabling a client to access a resource on a wide area network environment, the wide area network environment including a plurality of server array controllers, each server array controller having at least one corresponding server, the method comprising:

(a) employing an DNS server to load balance a request from a requestor using a mathematical conversion of an IP address associated with the requestor for handling by a selected server array controller, each subsequent and timely request from the requestor is persistently referred by the DNS server to the selected server array controller, wherein the mathematical conversion is based, in part, on a number of available servers associated with the plurality of server array controllers (col. 3, lines 31-38; col. 4, lines 50-58);

However, Brendel fails to explicitly teach the requestor being a local domain name (LDNS) server. Swildens teaches performing load-balancing algorithm by a LDNS (col. 3, lines 39-46).

Brendel and Swildens fail to explicitly teach (b) when a subsequent request is untimely, employing the EDNS server to load balance the subsequent request.

Yu teaches (a) employing an extended domain name system (EDNS) server to load balance a request from a connection associated with the client for handling by a selected server array controller, each subsequent and timely request from the connection is persistently referred by the EDNS server for handling by the selected server array controller; and (b) when the subsequent request is untimely, employing the EDNS server to load balance the request from the connection for handling by another selected server array controller (figure 1, 62; col. 5, lines 4-28).

At the time the invention was made, one of ordinary skill in the art would have been motivated to employ an extended domain name system server to load balance a request from the client to a selected server because an EDNS supports non-standard domain naming, which facilitates more flexible domain name serving, thus making the system more efficient.

Regarding claim 14, Yu teaches the method of claim 13, wherein the EDNS server includes a data store for storing information associated with the request (figure 1, 62; col. 5, lines 4-28).

Regarding claim 17, although Yu does not explicitly teach the method of claim 14, further comprising another EDNS server that includes another data store for storing information

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associated with the request, wherein the EDNS and the other EDNS share request information between the data store and the other data store, one of ordinary in the art at the time the invention was made would have been motivated to employ another EDNS server in order to evenly distribute the client's request, therefore expanding the processing time of the request handling..

Allowable Subject Matter

Claim 3 has been written in independent form, therefore is allowed over the prior art of record.

Claim 4 depends on claim 3, therefore is also allowed.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N. Boutah whose telephone number is 571-272-3908. The examiner can normally be reached on Monday-Friday (9:00 am - 5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER